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Summary of Baseline Household Survey Results: Sarlahi, Nepal

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Abstract

This report summarizes the results of a baseline household-level survey, led by the Climate Change, Agriculture and Food Security Consortium Research Program[1] (CCAFS), carried out in 7 villages and 140 households in Sarlahi, in southeast Nepal. The objective of this baseline effort was to describe the characteristics of the farming systems found across a wide range of research sites in 12 countries, including the Sarlahi site, and to better understand what kinds of farming practice changes households have been making and why. We gathered information on the socio-economic and demographic characteristics of these farming households, basic livelihood and welfare indicators, agriculture and natural resources management practices and strategies, access to and use of climate and agricultural-related information, and current risk management, mitigation and adaptation practices. Randomly selected households were the units of analysis and a face-to-face questionnaire was the primary tool that was used for data collection.

In terms of livelihoods, virtually all households surveyed are producing some food crops, and 36% of them also sell some crops. Over half are producing fruit but only 14% sell some of it. Eight-six percent of household produce vegetables and one-third are also selling them.

Eighty-three percent of households own large livestock (cattle or buffalo), and even more (89%) have some small livestock (sheep, goats and/or chickens). One-half of the surveyed households also sell some small livestock, and livestock products such as milk, meat and/or eggs are important for livelihoods, with more than two-thirds producing and consuming milk or other livestock products, and 40% selling livestock products. They also produce fodder to feed their animals and gather wood for fuel and timber for their own needs, but few sell these products coming from their own farms.

Off-farm livelihood sources are important, with 41% of households producing/harvesting food crops and 99% gathering fruit from places other than their own farms. Virtually all households are fishing elsewhere, and over half are gathering fuelwood from off-farm sources. Timber and fodder are also sourced outside their farms by less than one-fifth of households.

Sources of income diversification are rather limited, with one-fifth of households reporting no other source of cash income than their farms. One-half of these households have just one or two off-farm income sources.

For those with off-farm sources of cash income, one-third was accessing formal credit (e.g. from a bank), while informal loans or credit accounted for an important source of cash for around 25% of households. Less than 25% obtained income from employment, and the same number received payments from the government or other established programmes. A similar amount made an income from some sort of business, and approximately half that number received remittances and cash gifts. A small proportion received rental income from land or machinery.

[1] For more information about CCAFS, see: http://www.ccafs.cgiar.org.

The survey results show that two-thirds of households are able to obtain a sufficient amount of food to feed their families throughout an 'average year' (i.e. not a year with an extreme weather event). Much more worrying is the revelation that 6% of households face more than six food deficit months in a year, and 28% deal with between one and six food deficit months annually.

Households have been making changes in their farming practices over the last 10 years, but they are not extensive. Rice, wheat and maize are the most important food crops, and two-thirds of households are producing the same three main crops now as they did 10 years ago.

When asked if over the last 10 years households had introduced any new crops or new varieties, 36% said they had incorporated three or more new crops and/or varieties into their farming systems. Over a quarter had introduced one or two new crops or varieties over the last 10 years, but 37% said they had not introduced any new crops or varieties.

Changes in soil and/or water management practices have been limited. Virtually all households reported making no agricultural water management changes in the last decade, while over 40% of households introduced one soil management-related change, and roughly a third have introduced two. One quarter of households made no type of soil management-related change at all over the last 10 years. Over two-thirds of households have made no tree/agroforestry management-related changes (e.g. planting trees on their farm) in the last decade, however.

Market-related reasons show up as the main drivers of change in land management in Sarlahi. One half of households cited labour-related reasons for making changes, and over a third cited land-related reasons. Only a very small number gave climate, pests and diseases and projects as factors leading to changing their cropping practices.

When we asked households about their purchases of fertilizer, seed, pesticides and veterinary medicine (in the last 12 months), almost all reported having purchased fertilizer over the last 12 months, and over 80% had bought pesticides. In the same period, just under 70% bought veterinary medicines, while only 32% bought seed. Just under a quarter had received credit for agricultural purchases.

Sources of water for agriculture are important in this area. One-half of these households are irrigating their land, and over one-third has boreholes. Ten percent of households have dams or waterholes and 7% have water pumps. Just under a fifth have none of these sources of water for agriculture.

The only type of weather-related information received by households in this area was short-term weather forecasts (i.e. 1-3 days). This information was received by almost 70% of households. In over three-quarters of these households, both men and women were receiving this information. When asked where they got their weather-related information, most reported hearing it on the radio or television. None of the respondents said they receive weather-related information from NGOs, government extension or veterinary officers or meteorological offices.

Collective action for agricultural and natural resource management-related activities appears to be very low. While almost 75% belong to a savings and credit group, membership of groups involved in vegetable production, agricultural product marketing, seed production, or irrigation is very low in this area. One quarter of households are not involved in any agricultural or natural resource management related groups.

Assets, as a wealth proxy were queried. Almost all households have a bicycle, 19% have a motorbike, no-one owns a car or truck, and 9% have no transport-related assets. Most households had cell phones (87%), televisions (68%) and radios (81%). Seven percent reported owing a computer. One-half of these households have a bank account. Two-thirds own agricultural production assets such as a mechanical plough, treadle pump (17%), and fishing nets (28%), but one-quarter of surveyed households own no such assets.

This baseline survey has provided some key indicators relating to household well-being and agricultural adaptation strategies that will be monitored over time. There is more information captured in the survey than reported in this brief summary, and further analysis is encouraged (the data is available at www.ccafs.cgiar.org/resources/baseline-surveys). This information will help to better target interventions aimed at improving these indicators, as well as identifying key gaps in information that warrant further research.

Keywords

Climate change; agriculture; Nepal; farming system; food security, adaptation, mitigation

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CEAPRED, the Centre for Environmental and Policy Research, was established in 1991 and is a leading national developmental NGO in Nepal. It is one of the first NGOs in Nepal to work on agricultural development issues, and focuses on sustainable poverty reduction and enhancement of food security and livelihoods of the poor, disadvantaged and deprived families, including small and marginal farmers, of rural Nepal. CEAPRED's approach to poverty reduction consists of promotion of new and better economic and livelihood opportunities at the local level and linking these opportunities to markets. <www.ceapred.org.np>

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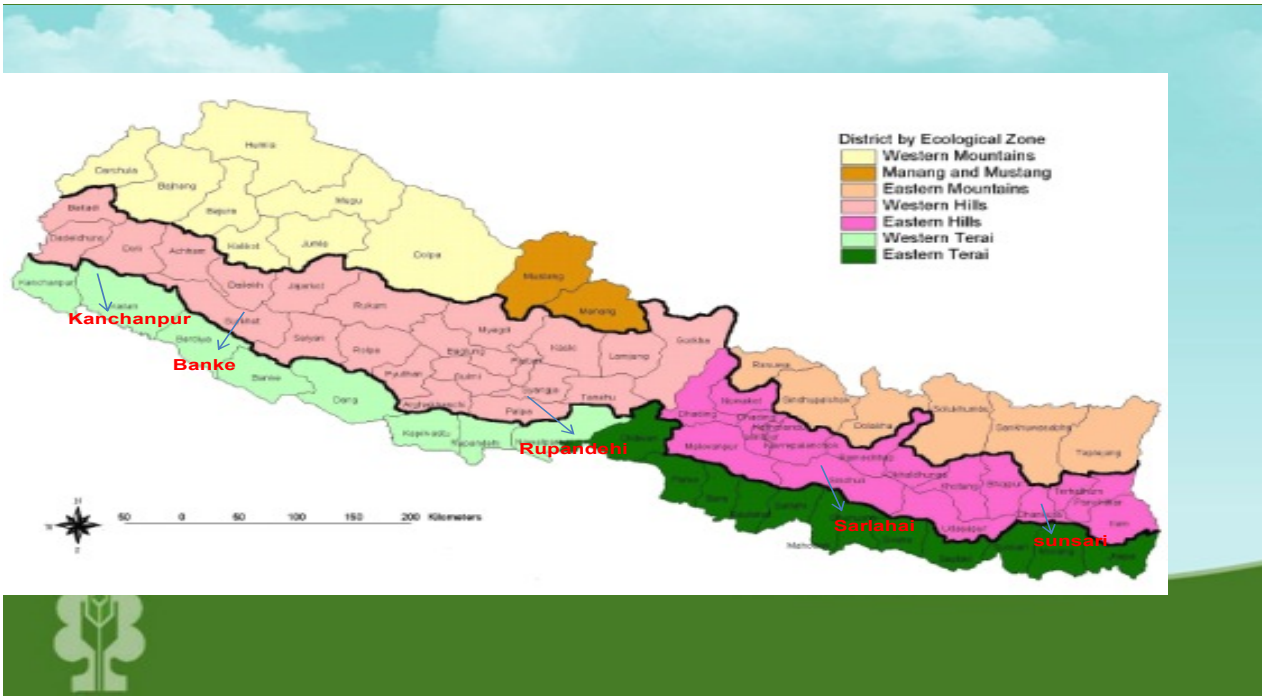
1.0 Introduction

This report represents the results of an analysis of the CCAFS baseline household survey carried out in January 2011 in 7 villages, with 140 households, in Sarlahi, Nepal (see Figure 1.1). The objective was to gather baseline information at the household level about some basic indicators of welfare, information sources, livelihood/agriculture/natural resource management strategies, needs and use of climate and agriculture related information and current risk management, mitigation and adaptation practices. The survey aimed to capture some of the diversities of landscape, communities and households with enough precision in the indicators to encapsulate changes that occur over time. One aim is to revisit these same households after 5 and 10 years to document changes that are (or are not) occurring in these indicators over time.

Team members and the villages surveyed are listed in Annexes 1 and 2. The questionnaire and training materials associated with it, including data entry and management guidelines, as well as the data itself (which we are encouraging interested researchers and other partners to make use of), can be found at www.ccafs.cgiar.org/resources/baseline-surveys.

Figure 1.1 Map of Nepal showing Sarlahi



1.1 Household Respondent & Type

Almost all households (Table 2.1) were male headed. However, of the respondents, 72% were male, while 28% were female. The enumerators were more likely to find and interview male members because women were generally not allowed to talk to strangers in the presence of male family members. It was only when the male members were not present that females were interviewed.

Table 2.1 Household type

Household type	% of households
Male Headed	99
Female Headed	1
Total	100

With respect to household ethnicity, Table 2.2 shows that the main ethnic community of the surveyed households in this site is Dalit, at over 80%.

Table 2.2 Household ethnicity

Ethnicity	% of households
Dalit	82
Janajati	6
Others	12

2.0 Education levels

Over 80% of households included someone with a secondary education, and just over half of respondents stated that the highest level of education of a resident family member (i.e. for most of the year) was post-secondary (Table 2.3). About 10% reported that primary education was the highest level of education of a resident family member, while less than 2% included no one with formal education.

Table 2.3 Level of education

Education level	% of households
No formal education	1
Primary	14
Secondary	32
Post secondary	52

3.0 Sources of livelihood

3.1 On-farm livelihood sources

Table 3.1 shows the diversity in production, consumption and sales of different types of agricultural products. Products included food crops, fruit, vegetables, livestock (both small and large) timber, fuel wood, manure, fish and honey. While almost every household produced food crops, only about a third were making income from them. In fact much of the food production, including livestock, and livestock products, was consumed at home. Fish production was very limited.

Table 3.1 Household production, consumption and sale of on-farm agricultural products

Products	% of households producing	% of households consuming	% of households selling
Food crop (raw)	98	98	36
Food crop (processed)	98	98	30
Fruit	58	58	14
Vegetables	86	85	31
Fodder	49	49	1
Large livestock	83	78	22
Small livestock	89	87	50
Livestock products	69	69	39
Fish	4	4	1
Timber	34	34	6
Fuel wood	43	43	1
Honey	1	1	0
Manure/compost	83	81	1

3.2 Off-farm livelihood sources

Very few households produce fish (Table 3.1), so it is not surprising that this important source of food is obtained off-farm by most households, as seen in Table 3.2. Fruit, on the other hand, is produced by over 50% of the households (Table 3.1), yet almost every household also consumes fruit from off-farm sources (Table 3.2), indicating that they are not producing enough fruit for their needs. Table 3.2 also

shows that just over a third of households consume food crops from off-farm sources, less than a quarter are collecting timber off-farm, while just over half are getting their fuel wood from off-farm sources. About 14% of households obtain their fodder off-farm.

Table 3.2 Agricultural products from off-farm sources

Product coming from off-farm sources	**% of households producing**	**% of households consuming**	**% of households selling**
Food crops	41	41	12
Fruits	99	99	0
Fodder	14	14	1
Fish	98	98	1
Timber	17	17	0
Fuel wood	54	52	0
Honey	6	6	0
Manure/compost	4	4	0

3.3 Sources of cash income

As shown in Table 3.3, just under a fifth of households have no other source of cash income than their farms. Just under, and just over, one quarter of households receive cash from one and two sources, respectively, and about one fifth receive cash from three sources.

Table 3.3 Number of cash sources of income

Number of cash sources	**% of households**
None	19
One source	24
Two sources	27
Three sources	19
Four or more sources	12

When income was received, it came from a diverse range of sources (Table 3.4). The most common source of cash income (just over 34%) was from a formal loan or credit (e.g. from a bank), while informal loans or credit accounted for an important source of cash for around 25% of households. Less than 25% obtained income from employment and the same number received payments from the government or other established programmes. A similar amount made an income from some sort of business, and approximately half that number received remittances and cash gifts. A small proportion received rental income from land or machinery. Roughly 20% had no source of off-farm cash income at all.

Table 3.4 Sources of cash income (off-farm)

Source of cash income	% of households
Employment on someone else's farm	23
Business	21
Remittances/gifts	11
Payments from govt or other projects/programs	23
Loan or credit from a formal institution	34
Informal loan or credit	22
Renting out farm machinery	11
Renting out your own land	14
No off-farm cash source	19

3.4 Who does most of the work for on and off-farm products?

When asked who does the most work for on and off-farm products, the vast majority of respondents reported (92% on-farm and 81% off-farm) that several people in the family bear the responsibility for this work. Very few people reported that either men or women solely are responsible for doing both on- and off-farm work.

Table 3.5 Who does most of the work for on and off-farm products?

	On-farm products - % households	off-farm products - % households
Several people	92	81
Equally shared	4	8
Women	4	2
Men	0	9

Table 3.6 shows the responsibilities for each on and off-farm product. As mentioned above there are very few cases where men or women are solely responsible for any product. Notable exceptions are timber, where men have the main labour responsibilities, for one-half of households reporting collecting timber from off-farm sources, and for the 13% of households where it is produced on-farm. With manure/compost, women are responsible in 30% of cases where this is produced on-farm, but men are responsible in 20% of cases where this is collected off-farm. Note these percentages are with respect to the number of households that report they are producing/collecting these products.

Table 3.6 Who does most of the work for on and off-farm products?

	Women (% of households)	Men (% of households)	Several HH members (% of households)
On-farm			
Food crop	1	0	98
Food crop (processed)	23	2	74
Other cash crop	0	7	93
Fruit	0	1	99
Vegetables	3	0	98
Fodder	10	2	88
Large livestock	14	1	85
Small livestock	11	1	88
Livestock products	10	0	90
Timber	0	13	87
Fuel wood	3	3	92
Manure/compost	30	0	70
Off-farm			
Food crop	0	5	95
Fruit	4	10	86
Fodder	16	0	84
Fish	2	12	85
Timber	4	50	46
Fuel wood	3	16	81
Honey	0	25	75
Manure/Compost	0	20	80

NB: the percentages in Table 3.6 are with respect to the number of households producing each product type.

4. Crop, farm animals/fish, tree and soil, land water management changes

4.1 Crop-related changes

When asked about the three major crops that were most important for their livelihoods, most households named rice, wheat and maize. They were then asked about changes made to their crop farming systems and practices over the last 10 years. Table 4.1 shows that almost two-thirds of households (62%) are producing the same three main crops as they did 10 years ago, and just over a third are producing the same two main crops. Thus with respect to their key crops (in terms of overall livelihoods), very few households have made changes over the last decade.

Table 4.1 Changes to crops grown in last 10 years

Crop changes	% of households
All crops different	2
One crop the same	2
Two crops the same	34
Three crops the same	62

4.2 Adopters of new crops/varieties

When asked if over the last 10 years households had introduced new crops or new varieties, 36% said they had incorporated three or more new crops and/or varieties into their farming systems. Over a quarter had introduced one or two new crops or varieties over the last 10 years, but 37% said they had not introduced any new crops or varieties (Table 4.2).

Table 4.2 Adoption of new crops/varieties over the last 10 years

Change in practice	% of households
No introduction of new crops or varieties	37
Have introduced 1 or 2 new crops and/or new varieties	27
Have introduced 3 or more new crops and/or varieties	36

4.3 Crop-related changes

With respect to changes in farming practices relating to their crops, households were asked which of the following changes they had made over the last 10 years: introduced intercropping, earlier land preparation, earlier planting, later planting, expanded area, reduced area, started using pesticides/herbicides, integrated pest management, and/or integrated crop management. The results, as seen in Table 4.3, show that 46% of households made more than three such crop-related changes in the last decade, 40% made one or two and only 13% of households made none.

Table 4.3 Crop-related changes

Changes made	% of households
No cropping-related changes	14
One or two cropping-related changes	40
More than three cropping-related changes	46

4.4 Water management-related changes

Respondents were also asked which of the following changes in water management they had made in the last 10 years, including: started irrigating, introduced micro-catchments, introduced improved irrigation, and/or introduced improved drainage.

Table 4.4 shows that 94% of households had made none of these changes in water management while only a very small percentage had made one change.

Table 4.4. Water management-related changes

Changes made	% of households
No water management-related changes	94
One water management-related change	6

4.5 Soil management-related changes

In a similar vein, respondents were asked if they had made any of the following behavioural changes in last 10 years:

- stopped burning
- introduced crop cover

- introduced ridges or bunds
- introduced mulching
- introduced terraces
- introduced stone lines
- introduced contour ploughing
- introduced rotations
- started using or using more mineral/chemical fertilizer
- started using manure/compost.

As shown in Table 4.5, over 40% of households introduced one soil management-related change and roughly a third have introduced two. Only 26% made no changes at all over the last 10 years.

Table 4.5 Soil management-related changes

Soil management changes	% of households
No soil-management-related changes	26
One soil management-related change	41
Two or more soil management-related changes	34

4.6 Tree-management related changes

When asked about tree management-related changes, one-third of respondents said (Table 4.6) that they have made agroforestry-related changes in the last 10 years, while the rest have made no changes.

Table 4.6 Tree/agroforestry management-related changes

Changes	% of households
No tree/agro-forestry related changes	69
Some tree/agro forestry related changes	31

4.7 Reasons for crop-related changes

The respondents were asked why they had made the specified crop related changes (more than one response was possible). The reasons related to: markets, climate, land, labour, pests and diseases, and projects.

The results in Table 4.7 show that market-related reasons were the main drivers of change. Almost a half of households cited labour-related reasons for change and over a third cited land-related reasons. Only a very small number gave climate, pests and diseases and projects as factors leading to changing their cropping practices.

Table 4.7 Reasons for changing cropping practices, by category

Reason for changing cropping practices	% of households
Markets	91
Weather/climate	3
Land	39
Labour	47
Pests/diseases	6
Projects	6

4.8 Livestock-related changes

Table 4.8 shows that just over a third (37%) of households have not made any changes affecting their livestock whereas almost a third have made changes affected 3 or more types of livestock.

Table 4.8 Number of animal types to which changes were made

No of animals	% of households
None	37
One animal types	12
Two animal types	19
Three or more animal types	32

When respondents were asked about the changes they had made to the animal types they were raising over the last decade, the majority of households (72%) reported raising two or three key types/species of animals, with one being different from 10 years ago (Table 4.9). 15% of households reported that they had two to three animal species, with two or three of them differing from animal production practices pursued by the family ten years earlier.

The results also show that 3% of households have no animals now, and had none ten years ago.

Table 4.9 Change in animal types in last 10 years

Animals changes	% of households
No animals listed currently and/or 10 years ago	3
Only one animal type listed and is the same as 10 years ago	7
Only one animal type listed and is different from 10 years ago	3
2-3 animal types listed and at most 1 is different from 10 years ago	72
2-3 animal types listed and 2 or 3 are different from 10 years ago	15

4.9 Adopters of new animal types/breeds

Respondents were asked whether they had introduced new animal types or breeds over the last 10 years. The results, shown in Table 4.10, reveal that 89% of households have not introduced new types of animals or new breeds.

Table 4.10 Adopters of new animal types/breeds

Changes in animal types	% of households
Not introduced any new animal types or breeds	89
Introduced one or two animal types or breeds	11

4.10 Herd related changes

For herd related changes, the following adaptations/changes in practices were considered: reductions in herd size, increases in herd size, and/or change in herd composition.

As shown in Table 4.11, over the last 10 years almost two-thirds of households have made no herd-related changes, with a third of households making one or two herd-related changes.

Table 4.11 Herd-related changes

Herd-related changes	% of households
No herd related changes	66
One or two herd related changes	34
Three or more herd related changes	1

4.11 Reasons for changes to livestock rearing practices

When asked why they had made changes to livestock rearing practices (Table 4.12), just over a half of respondents cited market-related reasons, while a similar number cited reasons relating to labour issues. Only a quarter of households mentioned pests and diseases as reasons for making changes in their livestock management practices.

Table 4.12 Reasons for changing livestock practices

Reason for changing livestock practices	% of households
Markets	54
Weather/climate	15
Labour	58
Pests/diseases	25

Note: percentages in Table 4.12 are with respect to the number of households making changes.

For those who cited market-related reasons to changes in livestock practices, 67%, 92% and 72% of households, respectively, stated that the change was made due to better prices, new opportunities to sell and higher productivity.

5.0 Food security

The respondents were asked about the monthly source of food for the family, i.e. whether it came mainly from their own farm or elsewhere. In addition we asked households which months of the year they struggled to have enough food to feed their family (from any source).

5.1 Food sources from on-farm across the year

Table 5.1 shows family food sufficiency from on-farm sources throughout an average rainfall year. It is clear that 65% of households obtain food from their own farms all year round. Only 23% of households have on-farm food sufficiency for seven to eleven months, and 12% have on-farm food sufficiency for less than seven months. July, August and September are considered the worst months, with over 20% of households in each of these months relying on off-farm food sources

Table 5.1 Summary for on-farm food sources across the year

Food is coming from on-farm sources for:	**% of households**
All months on-farm	65
Between 7 and 11 months on-farm	23
Less than 7 months on-farm	12

5.2 Food security index

The food security index is based on the number of months that a household has difficulty getting food *from any source* during an average rainfall year (i.e. the number of food deficit months).

The survey results show that two-thirds of households are able to obtain a sufficient amount of food to feed their families throughout an 'average year' (i.e. not a year with an extreme weather event, Table 5.2). However, 6% of households face more than six food deficit months in a year. Nine percent of households access enough food to feed their families for ten months of the year. The survey also noted that 8% and 11% of households in the Sarlahi site face five to six, and three to four, food deficit months respectively.

Table 5.2 Food security index

Number of hunger months	**% of households**
More than 6 food deficit months/year	6
5-6 food deficit months/year	8
3-4 food deficit months/year	11
1-2 food deficit months/year	9
Food all year round/no food deficit period	66

6.0 Inputs and credit

When we asked households about their purchases of fertilizer, seed, pesticides and veterinary medicine (in the last 12 months) almost every one of them (98%) replied that they had purchased fertilizer over the last 12 months, and over 80% had bought pesticides. In the same period, just under 70% bought

veterinary medicines, while only 32% bought seed (Table 6.1). Just under a quarter had received credit for agricultural purchases.

Table 6.1 Purchased input use

Inputs	% of households
Did you use purchased seed in last 12 months?	31
Did you use purchased fertilizer in the last 12 months?	98
Did you purchase pesticides in past 12 months?	81
Did you purchase veterinary medicine in past 12 months?	66
Did you get credit for agric activities in past 12 months?	24

6.1 Fertilizer use

When households were asked what type of fertilizer they used, almost all of them said they apply urea to their crops, while about 90% said they use DAP. Just under 75% reported that they use a local mix of fertilizers and a very small number use CAN. Several types of fertilizers are used by 32% of households.

Table 6.2 Type of fertilizer

Fertilizer type	% of households
Urea	99
DAP	89
CAN	1
Local mixture	72
Several types	32

6.2 Hired machinery or labour

When asked whether they ever hired machinery or labour, over 80% said that they hire both labour and a tractor (Table 6.3). Tilling land by tractor was easier and cheaper for farmers compared to animal

drawn ploughs. However, about one third still use an animal drawn plough, while a handful of households do not hire machinery or labour at all.

Table 6.3 Hired machinery or labour

Hiring for farm use	% of households
Do you sometimes hire an animal drawn plough?	37
Do you sometimes hire a tractor?	82
Do you sometimes hire farm labour?	90
Do not hire machinery or labour	4

6.3 Water for agriculture

Table 6.4 illustrates on-farm water sources used for agricultural purposes only (not for household use), Just over one-half of these households are irrigating their land, and over one-third have boreholes (37%). 10% of households have dams or waterholes and 7% have water pumps. Just under a fifth have none of these sources of water for agriculture.

Table 6.4 On-farm water sources for agriculture

On-farm agricultural water source	% of households
Irrigation	55
Dams or waterholes	11
Boreholes	37
Water pumps	7
None of the above	19

Note: 12% of households had not answered this question – percentages here are with respect to those answering.

7.0 Climate and weather information

7.1 Sources of weather information

The only type of weather-related information received by households in this area was short-term weather forecasts (i.e. 1-3 days). This information was received by almost 70% of households. In over three-quarters of these households (77%), the information was received by both men and women.

Table 7.1 Short-term weather forecasts - who receives information?

Who receives information	% of households receiving information
Men	20
Women	3
Both	77

When asked where they got their weather-related information, most reported hearing it on the radio or television, with very few citing newspapers and only one citing friends or relatives (Table 7.2). None of the respondents said they receive weather-related information from NGOs, government/extension or veterinary officers or meteorological offices.

Table 7.2 Sources of information

Source of information on extreme events	% of households receiving
Radio	91
Televison	78
Government agricultural or veterinary officer	0
NGO project officers	0
Friends, relatives or neighbours	1
Meterological offices	0
Newspaper	5

7.2 Climate-related crises

The households were asked whether they had faced a climate-related crisis in the last five years and whether or not they received help with it. And if so, they were queried as to the source of assistance.

The results show that nearly three-quarters of surveyed households in Sarhalai have not faced a climate-related crisis in the last five years. Of those who had (27%), most reported that they had received no assistance, with only a handful saying that they had received some, citing their friends as the source of the assistance.

8.0 Community groups

Respondents were asked whether they belonged to any agricultural-related groups within the community. Table 8.1 shows that three-quarters of households belong to a savings and credit group. Membership of groups working together on vegetable production, agricultural product marketing, seed production and irrigation is very low in this area. 22% households are not involved in any community groups.

Table 8.1 Group membership

Household belong to the following groups?	% of households
Tree nursery/tree planting	3
Irrigation	1
Savings/credit related	74
Agricultural product marketing	3
Seed production	9
Vegetable production	12
Not a member of any groups	22

Note: percentages are with respect to the number of households answering the questions about group membership

Almost two-thirds of households (63%) are members of just one community group. Very few households are members of two or more groups.

Table 8.2 Number of groups

Number of groups households are members of	% of households
No groups	22
One group	63
Two groups	8
Three or more groups	7

9.0 Asset ownership

Households were asked about ownership of assets according to a checklist (as the same assets were inquired about across all baseline sites). The assets they were asked about include the following: Energy-related: generator, solar panel, biogas digester, liquid petroleum gas; Information-related: radio, television, cell phone, internet access, computer; Production means: tractor, mechanical plough, thresher, boat, fishing nets, mill; Transport: bicycle, motorbike, car or truck; Luxury items: fridge, air conditioning, fan, bank account, improved stove.

Table 9.1 reports the results, and it shows that 91% of households have a bicycle, 19% have a motorbike, no-one owns a car or truck, and 9% have no such transport-related assets at all.

Most households had information assets, including cell phones (87%), televisions (68%) and radios (81%). Seven percent reported owing a computer.

One-half of these households have a bank account.

Two-thirds own agricultural production assets such as a mechanical plough, treadle pump (17%), and fishing nets (28%), but one-quarter of surveyed households own no such assets.

Table 9.1 Assets

Assets Category	Asset	% of households
Information asset	Radio	81
	Television	68
	Cell Phone	87
	Computer	7
	No access	3
Luxury asset	Refrigerator	3
	Electric fan	78
	Bank account	53
	No access in luxury	17
Transport asset	Bicycle	91
	Motor cycle	19
	Car/truck	0
	No access	9
Production asset	Tractor	4
	Mechanical Plough	67
	Treadle pump	17
	Thresher	4
	Fishing nets	28
	No assets	23
Energy asset	Generator (electric or diesel)	1
	Bio gas digester	9
	LPG (liquid pressurized gas)	27
	No asset	67

Asset Indicator

An asset indicator was developed for cross-site comparison reasons and in order to track changes over time (Table 9.2).

Table 9.2 Asset indicator

Inputs	**Percent of households**
No Assets	3
1-3 assets	13
4 or more assets	84

Three percent of surveyed households had none of the assets listed in the questionnaire. Thirteen percent own between one and three of these assets, and 84% own 4 or more.

ANNEX 1. Survey team members

Mr. Chiranjibi Adhikari - team Leader

Mr. Ganesh Acharya- supervisor

Mr. Bhola Pandey- enumerator

Mr. Santosh Sharma- enumerator

Mr. Nemm Lal Pandey- enumerator

Ms Laxmi Khadka- enumerator

Ms. Prapti Adhikari- data entry clerk

Ms. Reena Shrestha- data entry clerk

ANNEX 2. Village selection and data collection process

The CCAFS team chose the 10km x 10km block according to the established criteria. Within this block all villages were listed and seven were chosen randomly. Within the seven villages a list of all households was generated with the help of village authorities, and 140 households were then randomly selected and visited. The interviews were usually with the household head and spouse.

The seven villages were:

1. Jabdi-9, Ranjitpur
2. Ishowrpur-8, Sarlahi
3. Haripur-6
4. Haripur-5
5. Ishowrpur-6, Ramnagar
6. Ranjitpur-9, Jabdi
7. Ranjitpur-2, Jabdi